

CLAIMS

- 1 1. A method of treating a porous plastic object comprising :
 - 2 (a) removing surface porosity of said object;
 - 3 (b) smoothening said surface with a curable polymeric hardener; and
 - 4 (c) curing said hardener.
- 5 2. A method according to claim 1 further comprising :
 - 6 (d) sanding said surface to remove roughness.
- 7 3. A method according to claim 2 further comprising :
 - 8 (e) applying a layer of lacquer to obtain a glossy appearance.
- 9 4. A method according to claim 3 further comprising :
 - 10 (f) Colour printing on said surface by cubic printing, tampon printing
 - 11 or letter stanza transfer.
- 12 5. A method according to claim 3 further comprising :
 - 13 (f) Texturing said surface by spray painting.
- 14 6. A method according to claim 1 wherein said object is produced by
- 15 selective laser sintering of nylon powder.
- 16 7. A method according to claim 1 wherein step (a) is performed by
- 17 soaking said object in a first curable polymer having sufficiently low
- 18 viscosity to penetrate the pores of said object; and
- 19 curing said polymer.

- 20 8. A method according to claim 1 wherein said curable polymer in step
21 (b) is a UV-curable lacquer.
- 22 9. A method of treating a porous plastic rapid prototype having a rough
23 surface with miniature steps, said method comprising :
- 24 a) infiltrating the pores of said plastic object with a curable
25 polymer;
- 26 b) curing said polymer;
- 27 c) applying an external coating of a curable polymeric hardener,
28 said hardener having sufficient viscosity to remain on said
29 surface and to fill up said miniature steps to form a smooth
30 surface; and
- 31 d) curing said hardener.
- 32 10. A method according to claim 9 further comprising :
- 33 e) sanding said surface remove roughness.
- 34 11. A method according to claim 10 further comprising :
- 35 f) applying a layer of lacquer on said surface to obtain a glossy
36 appearance.
- 37 12. A method according to claim 11 further comprising :
- 38 f) performing Tampon printing, letter stanza transfer or cubic printing
39 on said surface.
- 40 13. A method according to claim 9 wherein said prototype is made from
41 nylon using selective laser sintering.
- 42 14. A plastic rapid prototype containing pores and miniature steps on
43 the surface, said pores infiltrated and sealed with a polymeric resin,

44 said miniature steps smoothened by a polymeric hardener whereby
45 further post-processing may be performed on said surface.

46 15. A rapid prototype according to claim 14 further comprising a coating
47 of high glossy lacquer over said hardener coating.

48 16. A rapid prototype according to claim 14 further comprising a coating
49 of paint over said coating of hardener.

50 17. A rapid prototype according to claim 15 further comprising a coating
51 of painting over said coating of high glossy lacquer.

52 18. A rapid prototype according to claim 16 wherein said paint coating is
53 textured.

54 19. A method of treating the surface of a plastic object comprising :

55 a) smoothening said surface with a curable polymeric hardener;
56 and

57 b) curing said hardener

58 20. A method according to claim 19 further comprising :

59 c) sanding said surface to remove roughness.

60 21. A method according to claim 20 further comprising :

61 d) applying a layer of lacquer to obtain a glossy appearance.

62 22. A plastic rapid prototype containing miniature steps on the surface,
63 said steps smoothened by a polymeric hardener whereby further
64 post-processing may be performed on said surface.

65 23. A rapid prototype according to claim 22 further comprising a coating
66 of high glossy lacquer over said hardener coating.

67 24. A rapid prototype according to claim 22 further comprising a coating
68 of high glossy lacquer over said hardener coating.

69 25. A rapid prototype according to claim 22 further comprising a coating
70 of paint over said coating of hardener.

71 26. A rapid prototype according to claim 25 wherein said coating of paint
72 is textured.

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